

WHAT IS CLAIMED IS:

1. An electrically conducting curable resin composition comprising (A) a vinyl ester resin, (B) at least one monomer selected from the group consisting of an allyl ester monomer, an acrylic acid ester monomer and a methacrylic acid ester monomer, (C) a radical
5 polymerization initiator and (D) at least 40% by mass of a carbonaceous filler based on the total mass of (A)+(B)+(C)+(D).

2. The electrically conducting curable resin composition as claimed in claim 1, which comprises from 3 to 50% by mass of the component (A), from 0.5 to 40% by mass of the component (B), from 0.05 to 10% by mass of the component (C) and from 40 to 95% by mass of the
5 component (D), based on the total mass of (A)+(B)+(C)+(D).

3. The electrically conducting curable resin composition as claimed in claim 1, wherein the vinyl ester resin (A) is a novolak vinyl ester resin.

4. The electrically conducting curable resin composition as claimed in claim 2, wherein the vinyl ester resin (A) is a novolak vinyl ester resin.

5. The electrically conducting curable resin composition as claimed in claim 1, wherein the component (B) is diallyl phthalate.

6. The electrically conducting curable resin composition as claimed in claim 2, wherein the component (B) is diallyl phthalate.

7. The electrically conducting curable resin composition as claimed in claim 1, wherein the radical polymerization initiator (C) is an organic peroxide or a photopolymerization initiator and the carbonaceous

filler (D) comprises graphite.

8. The electrically conducting curable resin composition as claimed in claim 2, wherein the radical polymerization initiator (C) is an organic peroxide or a photopolymerization initiator and the carbonaceous filler (D) comprises graphite.

9. The electrically conducting curable resin composition as claimed in claim 1, wherein the carbonaceous filler (D) comprises graphite having an aspect ratio of 5 or less and an average particle diameter of 5 to 100 μm .

10. The electrically conducting curable resin composition as claimed in claim 2, wherein the carbonaceous filler (D) comprises graphite having an aspect ratio of 5 or less and an average particle diameter of 5 to 100 μm .

11. The electrically conducting curable resin composition as claimed in any one of claims 1 to 10, wherein the carbonaceous filler (D) comprises graphite having an aspect ratio of 5 or less and an average particle diameter of 5 to 100 μm and comprises vapor grown carbon fibers having a fiber diameter of 0.05 to 10 μm and a fiber length of 1 μm to 5 mm and/or carbon nanotubes having a fiber diameter of 0.005 to 5 μm and a fiber length of 1 to 100 μm , in an amount of 40% by mass or less based on 100% by mass of carbonaceous filler (D).

12. An electrically conducting cured product obtained by curing the curable resin composition claimed in any one of claims 1 to 10.

13. An electrically conducting cured product obtained by curing the curable resin composition claimed in claim 11.

14. The electrically conducting cured product as claimed in claim 12, which has a volume resistivity of $1.0 \Omega\text{cm}$ or less.

15. The electrically conducting cured product as claimed in claim 13, which has a volume resistivity of $1.0 \Omega\text{cm}$ or less.

16. The electrically conducting cured product as claimed in claim 12, which has a heat conductivity is $1.0 \text{ W/m}\cdot\text{K}$ or more.

17. The electrically conducting cured product as claimed in claim 13, which has a heat conductivity is $1.0 \text{ W/m}\cdot\text{K}$ or more.

18. A separator for fuel cells comprising the electrically conducting cured product claimed in claim 14 and having a volume resistivity of $5 \times 10^{-2} \Omega\text{cm}$ or less and an air permeability of $1 \times 10^{-5} \text{ cm}^2/\text{sec}$ or less.

19. A separator for fuel cells comprising the electrically conducting cured product claimed in claim 15 and having a volume resistivity of $5 \times 10^{-2} \Omega\text{cm}$ or less and an air permeability of $1 \times 10^{-5} \text{ cm}^2/\text{sec}$ or less.

20. A separator for fuel cells comprising the electrically conducting cured product claimed in claim 16 and having a volume resistivity of $5 \times 10^{-2} \Omega\text{cm}$ or less and an air permeability of $1 \times 10^{-5} \text{ cm}^2/\text{sec}$ or less.

21. A separator for fuel cells comprising the electrically conducting cured product claimed in claim 17 and having a volume resistivity of $5 \times 10^{-2} \Omega\text{cm}$ or less and an air permeability of $1 \times 10^{-5} \text{ cm}^2/\text{sec}$ or less.